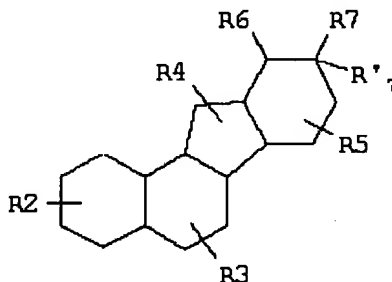


In the claims:

For the convenience of the Examiner, all claims being examined, whether or not amended, are presented below.

1-2. (Cancelled)

3. (Currently amended) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to a patient a composition comprising a purified steroidal alkaloid represented in the general formulas (I), or unsaturated forms thereof, pharmaceutically acceptable salts thereof, and/or seco-, nor- or homo-derivatives thereof:



Formula I

wherein, as valence permits,

R₂, R₃, R₄, and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

~~R₆, R₇, and R'7~~ are is absent or represents, ~~independently for each occurrence~~, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈; ~~or~~

R₆ and R₇, ~~or~~ R₇ and R'7, taken together form a ring or polycyclic ring;

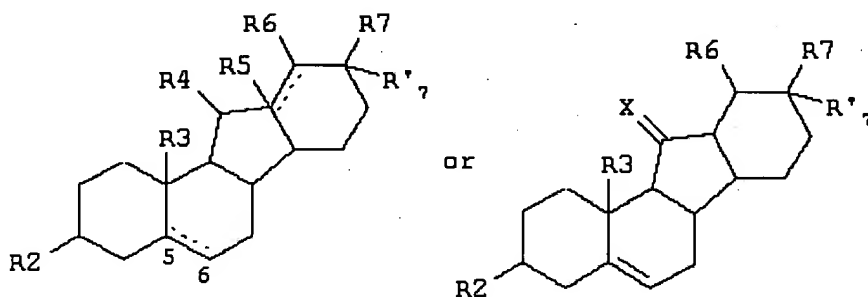
~~with the proviso that at least one of R₆, R₇, or R'₇ is present and~~ which includes a primary or secondary amine;

R₈ represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

m is an integer in the range 0 to 8 inclusive.

4. (Cancelled)

5. (Currently amended) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to a patient a composition comprising a purified steroidal alkaloid represented in the general formula (II), or unsaturated forms thereof, pharmaceutically acceptable salts thereof, and/or seco-, nor- or homo-derivatives thereof:



Formula II

wherein

R₂ and R₄, independently for each occurrence, represent one or more ~~substituents~~ substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

R₃, and R₅, independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or -(CH₂)_m-R₈;

~~R₆, R₇, and R'₇~~ are is absent or represents, independently, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8-OF_x$

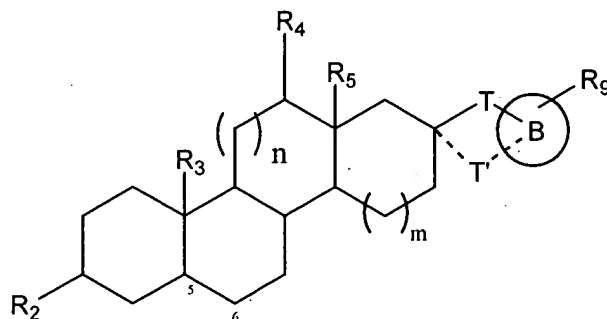
~~R₆ and R₇, or R₇ and R'₇~~, taken together form a ring or polycyclic ring, ~~with the proviso that at least one of R₆, R₇, or R'₇ is present and~~ which includes a primary or secondary amine;

R₈ represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

m is an integer in the range 0 to 8 inclusive; and

X represents O or S.

6. (Currently amended) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified alkaloid represented in the general formula (III), or unsaturated forms thereof, pharmaceutically acceptable salts thereof, and/or seco-, nor- or homo-derivatives thereof:



Formula III

wherein

R₂ and R₄ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R₃ and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxyl, silyloxy, amino,

nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

B represents monocyclic or polycyclic groups;

T represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-10 bond lengths;

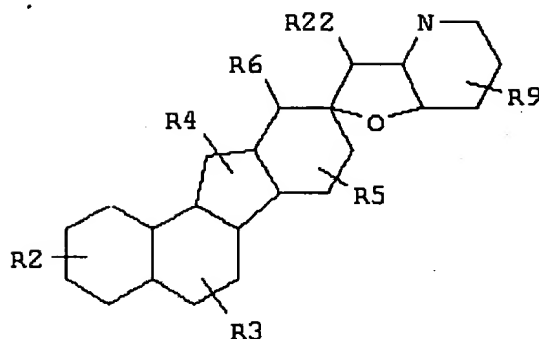
~~T' is absent, or~~ represents an alkyl, an aminoalkyl, a carboxyl, an ester, an amide, ether or amine linkage of 1-3 bond lengths, wherein ~~if T and T' are present together, then~~ T and T' taken together with the ring B form a covalently closed ring of 5-8 ring atoms;

R_9 represent one or more substitutions to the ring B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and

n and m are, independently, zero, 1 or 2;

with the proviso that T, T', B, and R_9 , taken together include at least one primary or secondary amine.

7. (Currently amended) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified steroidal alkaloid represented in the general formula (IV), or unsaturated forms thereof, pharmaceutically acceptable salts thereof, and/or seco-, nor- or homo-derivatives thereof:



Formula IV

wherein

R₂, R₃, R₄, and R₅ independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R₆ is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

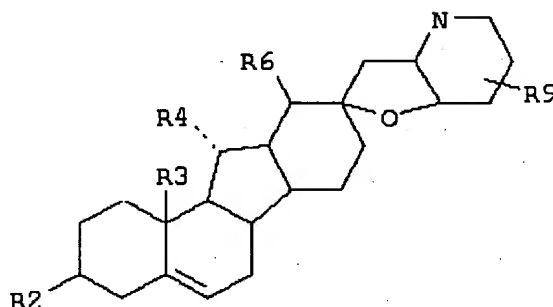
R₈ represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle;

R₉ represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxyl, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$; and

R₂₂ is absent or represents an alkyl, an alkoxyl or -OH.

8. (Currently amended) A method for inhibiting unwanted hair growth or inhibiting spermatogenesis, comprising administering to the patient a composition comprising a purified

steroidal alkaloid represented in the general formula (V) or unsaturated forms thereof, pharmaceutically acceptable salts thereof, and/or seco-, nor- or homo-derivatives thereof:



Formula V

wherein

R_2 and R_4 independently for each occurrence, represent one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_3 independently for each occurrence, represents one or more substituents selected from hydrogen, halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_6 is absent or represents halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates, phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$;

R_8 represents an aryl, a cycloalkyl, a cycloalkenyl, a heterocycle, or a polycycle; and

R_9 represents one or more substitutions to the ring A or B, which for each occurrence, independently represent halogens, alkyls, alkenyls, alkynyls, aryls, hydroxyl, =O, =S, alkoxy, silyloxy, amino, nitro, thiol, amines, imines, amides, phosphoryls, phosphonates,

phosphines, carbonyls, carboxyls, carboxamides, anhydrides, silyls, ethers, thioethers, alkylsulfonyls, arylsulfonyls, selenoethers, ketones, aldehydes, esters, or $-(CH_2)_m-R_8$.

9 & 10. (Cancelled)

11. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid does not substantially interfere with the biological activity of such steroids as aldosterone, androstane, androstene, androstenedione, androsterone, cholecalciferol, cholestane, cholic acid, corticosterone, cortisol, cortisol acetate, cortisone, cortisone acetate, deoxycorticosterone, digitoxigenin, ergocalciferol, ergosterol, estradiol-17- α , estradiol-17- β , estriol, estrane, estrone, hydrocortisone, lanosterol, lithocholic acid, mestranol, β -methasone, prednisone, pregnane, pregnenolone, progesterone, spironolactone, testosterone, or triamcinolone.

12. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid does not specifically bind a nuclear hormone receptor.

13. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid does not specifically bind estrogen or testosterone receptors.

14. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid has no estrogenic activity at therapeutic concentrations.

15. (Currently amended) The method of any of claims 3, or 5-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED_{50} of 1 mM or less.

16. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED_{50} of 1 μ M or less.

17. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid inhibits hedgehog-mediated signal transduction with an ED_{50} of 1 nM or less.

18 & 19. (Cancelled)

20. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid is administered as part of a therapeutic or cosmetic application.

21. (Cancelled)

22. (Currently amended) The method of any of claims 3 or 5-8, wherein the steroidal alkaloid is applied as a topical formulation.

23-26. (Cancelled)